


Automated Data Forms for Wetland Delineation

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March 8, 2017
Critical Methods for Wetland Delineation

ERDC/EL TR-05-23


Environmental Laboratory


US Army Corps
of Engineers
Engineer Research and
Development Center

Wetlands Regulatory Assistance Program

**Regional Supplement to the Corps
of Engineers Wetland Delineation Manual:
Arid West Region (Version 2.0)**

U.S. Army Corps of Engineers September 2008



Approved for public release; distribution is unlimited.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project Title _____ City/County _____ State _____ Sampling Date _____

Applicant/Owner _____ Section, Township, Range _____ Sampling Point _____

Investigator(s) _____ Location (elevation, latitude, etc.) _____ Local road (elevation, latitude, etc.) _____ Slope (%) _____

Subregion (S-200) _____ LAT _____ LONG _____ Datum _____

Site Map (Site Name) _____ NAD 83 coordinates _____

Are there hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____ Soil _____ or hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____ Soil _____ or hydrology _____ naturally protected? (If natural, explain any previous disturbance.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Is the Sampled Area _____ within a Wetland? Yes _____ No _____

Hydric Soil Present? Yes _____ No _____

Wetland Hydrology Present? Yes _____ No _____

Remarks _____

VEGETATION - Use scientific names of plants.

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Percent of Dominant Species

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Percent of Dominant Species

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Automated Data Forms - Overview

- >20 automated data forms developed by USACE Districts, other agencies, private companies.
 - ▶ Wide variety of functionality (no automation, 50/20 calculations, etc.)
 - ▶ None correctly identified soil or hydrology indicators based on user inputs
- Corps Staff in Detroit District had developed most functional format, so ERDC developed Excel spreadsheet-based data form for all regional supplements.
- **Automated forms improve technical accuracy and document review efficiency.**
- Forms utilize exact format has wetland delineation data forms - easy application, export to PDF, & incorporation into record.

**Open a blank
Automated
Data
Form
for every new data
point.**




Site information - Required Information In Yellow Essential For Indicator Application

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: _____		City/County: _____		Sampling Date: _____	
Applicant/Owner: _____		State: _____		Sampling Point: _____	
Investigator(s): _____		Section, Township, Range: _____			
Landform (hillside, terrace, etc.): _____		Local relief (concave, convex, none): _____		Slope %: _____	
Subregion (LRR or MLRA): _____		Lat: _____		Long: _____ Datum: _____	
Soil Map Unit Name: _____		NWI classification: _____			
Are climatic / hydrologic conditions on the site typical for this time of year?		Yes _____ No _____ (If no, explain in Remarks.)			
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed?		Are "Normal Circumstances" present? Yes _____ No _____			
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic?		(If needed, explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present?		Yes _____ No <u>X</u>		Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____	
Hydric Soil Present?		Yes _____ No <u>X</u>			
Wetland Hydrology Present?		Yes _____ No <u>X</u>			

Select State From Dropdown List

Required to select plant list and soil indicators

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region			
Project/Site: _____	City/County: _____	State: 	Sampling Date: _____
Applicant/Owner: _____	Section, Township, Range: _____		Sampling Point: _____
Investigator(s): _____	Local relief (concave, convex, none): _____		Slope %: _____
Landform (hillside, terrace, etc.): _____	Long: _____		Datum: _____
Subregion (LRR or MLRA): 	Lat: _____		
Soil Map Unit Name: _____	NWI class _____		
Are climatic / hydrologic conditions on the site typical for this time of year?		Yes _____ No _____	(in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed?		Are "Normal Circumstances" present? Yes _____ No _____	
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic?		(If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.			
Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>	
Hydric Soil Present?	Yes _____ No <u>X</u>	If yes, optional Wetland Site ID: _____	
Wetland Hydrology Present?	Yes _____ No <u>X</u>		

Select Appropriate LRR and MLRA

Required to select plant list and soil indicators

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: _____	City/County: _____	Sampling Date: _____
Applicant/Owner: _____	State: []	Sampling Point: _____
Investigator(s): _____	Section, Township, Range: _____	
Landform (hillside, terrace, etc.): _____	Slope %: _____	
Subregion (LRR or MLRA): []	Datum: _____	
Soil Map Unit Name: _____		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)		
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____		

Select the Land Resource Region and Major Land Resource Area for this site. This information is necessary for use of the proper hydric soil indicators and a few plant species indicator statuses.

SUMMARY OF FINDINGS – Attach site

Hydrophytic Vegetation Present?	Yes _____
Hydric Soil Present?	Yes _____
Wetland Hydrology Present?	Yes _____

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: _____	City/County: _____	Sampling Date: _____
Applicant/Owner: _____	State: []	Sampling Point: _____
Investigator(s): _____	Section, Township, Range: _____	
Landform (hillside, terrace, etc.): _____	Local relief (concave, convex, none): _____	Slope %: _____
Subregion (LRR or MLRA): []	Long: _____	Datum: _____
Soil Map Unit Name: _____	NW1 classification: _____	
Are climatic / hydrologic cond _____	or this time of year? Yes _____ No _____ (If no, explain in Remarks.)	
Are Vegetation _____, Soil _____	significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____	
Are Vegetation _____, Soil _____	naturally problematic? (If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS _____ showing sampling point locations, transects, important features, etc.		

LRR K
LRR K, MLRA 57
LRR K, MLRA 88
LRR K, MLRA 89
LRR K, MLRA 90A
LRR K, MLRA 90B
LRR K, MLRA 91A
LRR K, MLRA 91B

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>
Wetland Hydrology Present?	Yes _____	No <u>X</u>

Is the Sampled Area
within a Wetland? Yes _____ No X
If yes, optional Wetland Site ID: _____

Wetland Parameter Data Initially Checked As No Until Form Is Filled Out

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					
<div></div>					

**Remarks Section Allows
For Addition Of Text**

Wetland Hydrology

- Provides full description of hydrology indicators.
- Updates summary information based on user inputs.
- Automatically identifies 11 hydrology indicators.
- Inserts hydrology indicators based upon information from:
 - ▶ Soil information (e.g., Hydrogen Sulfide Odor)
 - ▶ Vegetation information (e.g., FAC Neutral Test)

Wetland Hydrology Indicators

Scrolling Over Indicator Provides Description of Indicator Requirements

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Presence of a layer of any thickness containing 2 percent or more iron-oxide coatings or plaques on the surfaces of living roots and/or iron-oxide coatings or linings on soil pores immediately surrounding living roots within 12 inches (30 cm) of the surface.	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Water-Stained Leaves (B9)		
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Checking One Primary Indicator Will Automatically Check Yes For The Hydrology Parameter

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

3

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
Field Observations:		
Surface Water Present? Yes _____ No _____	Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No _____	Depth (inches): _____	
Saturation Present? Yes _____ No _____	Depth (inches): _____	
(includes capillary fringe)		

1

2

Two Secondary Indicators Are Required To Be Checked To Meet The Hydrology Parameter

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks:	

3

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Marl Deposits (B15) (LRR U)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Moss Trim Lines (B16)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Shallow Aquitard (D3)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
		<input checked="" type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
Field Observations:		
Surface Water Present? Yes _____ No _____ Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>	
Water Table Present? Yes _____ No _____ Depth (inches): _____		
Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		

1

2

Checking Two Secondary Indicators Will Automatically Check Yes For The Hydrology Parameter

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

3

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum Moss (D8) (LRR T,U)
Field Observations:		
Surface Water Present?	Yes _____ No _____ Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present?	Yes _____ No _____ Depth (inches): _____	
Saturation Present?	Yes _____ No _____ Depth (inches): _____	
(includes capillary fringe)		

1

2

Automated Wetland Hydrology Indicators

Surface water A1	“X” generated from Field Observations in the Hydrology section.
High Water Table (A2)	“X” generated from Field Observations
Saturation (A3)	“X” generated from Field and Restrictive Layer in the Soil section.
Sparsely Vegetated Concave Surface (B8)	“?” generated from % Bare Ground in Herb Stratum, or other vegetation information in the Vegetation section.
Biotic Crust (B12)	“?” generated from % Cover of Biotic Crust in the Vegetation section.
Hydrogen Sulfide Odor (C1)	“X” generated if Hydric Soil Indicator Hydrogen Sulfide (A4) has been checked with an “X”.
Dry-Season Water Table (C2)	“?” generated from Field Observations in the Hydrology section.
Presence of Reduced Iron (C4)	“X” generated from Profile Description in the Soil section.
Thin Muck Surface (C7)	“X” generated from Profile Description in the Soil section.
Shallow Aquitard (D3)	In most regions, “?” generated from Restrictive Layer data in the Soil section. NCNE and WMVC “X” generated if Surface Water (A1) or High Water Table (A2) are also present. Not automatically generated in the Arid West Region.
FAC-Neutral Test (D5)	“X” generated from information in the Vegetation section.

Vegetation

- Combines NWPL and USDA plants database into a single searchable list.
- Species input via scientific name, common name, or synonym.
- Auto-fills species name with data entry.
- Automatic generation of indicator status.
- Calculation of 50/20 rule, dominance test, and prevalence index.

As You Enter Species Name It Automatically Begins To Populate

VEGETATION

– Use scientific

Tree Stratum (Plot size: _____)

1. Pinus arizonica



2.

3.

4.

5.

6.

VEGETATION

Use scientific n

Tree Stratum (Plot size: _____) Abs

% C

1. Pinus palustris
2. Pinus palustris
3. Long-Leaf Pine
4. Pinus pinaster
5. maritime pine
6. Pinus pungens
7. Table Mountain pine
8. Pinus remota
9. papershell pinyon
10. Pinus resinosa
11. Red Pine
12. Pinus rigida
13. Pitch Pine
14. Pinus serotina
15. Pond Pine
16. Pinus strobiformis
17. southwestern white pine
18. Pinus strobus
19. Eastern White Pine
20. Pinus sylvestris
21. Scots pine

Sag

50% of total cover

**Drop Down Box
Available For
Species
Selection By
Scientific Name
Or Common
Name**

Once Species Is Selected The Indicator Status Is Populated

VEGETATION


– Use scientific names of plants.

Tree Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	Pinus palustris			FAC
2.				
3.				
4.				
5.				
6.				

To search a species by Common Name: First hit the space bar before typing the name

VEGETATION

– Use scientific names of plants.

Tree Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	Pinus palustris			FAC
2.	Red Maple 			
3.				
4.				
5.				
6.				
		=Total Cover		
50% of total cover _____		20% of total cover _____		

VEGETATION

– Use scientific names of plants

Tree Stratum (Plot size: _____)

Absolute
% Cover

Dominant
Species

1. Pinus palustris

2. Red Maple

3. Norway Maple

4. Acer pseudoplatanus

5. sycamore maple

6. Acer rubrum

Red Maple

Acer saccharinum

Silver Maple

Acer saccharum

Sugar Maple

Acer spicatum

1. Mountain Maple

2. Acer X freemanii

3. Freeman maple

4. Achilles

5. yarrow

6. Achilles millefolium

Common Yarrow

Achillea ptarmica

Pearl Yarrow

Achnatherum

50% of total cover

20% of total cover

Shrub Stratum (Plot size: _____)

**Drop Down
Box
Available
For Species
Selection
By
Scientific
Name Or
Common
Name**

Upon Entering Absolute Cover, Dominance Is Automatically Determined As Well As Dominance Test And Prevalence Index Calculated

VEGETATION – Use scientific names of plants. Sampling Point: _____

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Pinus palustris</i>	30	Yes	FAC
2. <i>Acer rubrum</i>	10	Yes	FAC
3. <i>Taxodium ascendens</i>	10	Yes	OBL
4. _____			
5. _____			
6. _____			

50 = Total Cover

50% of total cover 25 20% of total cover 10

Sapling Stratum (Plot size: _____)

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			

= Total Cover

50% of total cover _____ 20% of total cover _____

Shrub Stratum (Plot size: _____)

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>10</u>	x 1 = <u>10</u>
FACW species: <u>0</u>	x 2 = <u>0</u>
FAC species <u>40</u>	x 3 = <u>120</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals <u>50</u> (A)	<u>130</u> (B)
Prevalence Index = B/A = <u>2.60</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

_____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

If Prevalence Index Is Not Applicable Check The Following Box

Sampling Point: _____	
Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)	
Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)	
Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals _____ (A)	_____ (B)
Prevalence Index = B/A = _____	
Hydrophytic Vegetation Indicators:	
<u> </u> 1 - Rapid Test for Hydrophytic Vegetation	
<u>X</u> 2 - Dominance Test is >50%	
<u> </u> 3 - Prevalence Index is $\leq 3.0^1$	
<u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)	
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	

☐ This sampling point has passed the Rapid Test for Hydrophytic Vegetation. I do not wish to have the Dominance Test worksheet calculated.

☒ This sampling point has passed the Rapid Test for Hydrophytic Vegetation and/or the Dominance Test. I do not wish to have the Prevalence Index worksheet calculated.

VEGETATION (

- Use scientific names of plants.

Sampling Point: _____

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus palustris	30	Yes	FAC
2. Acer rubrum	10	Yes	FAC
3. Taxodium ascendens	10	Yes	OBL
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
50% of total cover 50		=Total Cover	
20% of total cover 25		10	

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
50% of total cover _____		=Total Cover	
20% of total cover _____		_____	

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Morella cerifera	15	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
50% of total cover 15		=Total Cover	
20% of total cover 8		3	

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pteridium caudatum	10	Yes	UPL
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
50% of total cover 10		=Total Cover	
20% of total cover 5		2	

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
50% of total cover _____		=Total Cover	
20% of total cover _____		_____	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 10	x 1 = 10
FACW species 0	x 2 = 0
FAC species 55	x 3 = 165
FACU species 0	x 4 = 0
UPL species 10	x 5 = 50
Column Totals 75 (A)	225 (B)
Prevalence Index = B/A = 3.00	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

3 - Prevalence Index is <3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present?

Yes X No

Hydrophytic Vegetation Parameter Automatically Checked Based On Data Entered

Automatically Accounts For Ties In Absolute Cover When Determining Dominance

VEGETATION (Five Strata) – Use scientific names of plants.

Tree Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Pinus palustris</i>	10	Yes	FAC
2.	<i>Acer rubrum</i>	5	Yes	FAC
3.	<i>Taxodium ascendens</i>	5	Yes	OBL
4.	<i>Pinus taeda</i>	5	Yes	FAC
5.				
6.				
		25	=Total Cover	
50% of total cover		13	20% of total cover	5

FAC Neutral Is Automatically Checked Based On Vegetation Data As Well As Other Indicators That May Potentially Be Met

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☒ Water Marks (B1)
- ☒ Sediment Deposits (B2)
- ☒ Drift Deposits (B3)
- ☒ Algal Mat or Crust (B4)
- ☒ Iron Deposits (B5)
- ☒ Inundation Visible on Aerial Imagery (B7)
- ☒ Water-Stained Leaves (B9)
- ☒ Aquatic Fauna (B13)
- ☒ Marl Deposits (B15) (LRR T,U)
- ☒ Hydrogen Sulfide Odor
- ☒ Oxidized Rhizospheres
- ☒ Presence of Reduced Iron (C4)
- ☒ Recent Iron Reduction in Tilled Soils (C6)
- ☒ Thin Muck Surface (C7)
- ☒ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☒ Surface Soil Cracks (B6)
- ☒ ? Sparsely Vegetated Concave Surface (B8)
- ☒ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☒ x Geomorphic Position (D2)
- ☒ x Shallow Aquitard (D3)
- ☒ X FAC-Neutral Test (D5)
- ☒ Sphagnum Moss (D8) (LRR T,U)

On concave land surfaces (e.g., depressions and swales), the ground surface is either unvegetated or sparsely vegetated (less than 5 percent ground cover) due to long-duration ponding during the growing season.

Field Observations:

Surface Water Present? Yes ☐ No ☐ Depth (inches):

Water Table Present? Yes ☐ No ☐ Depth (inches):

Saturation Present? Yes ☐ No ☐ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Hydric soils

- Correct format required for depth and color inputs
- Drop down menus for all other soil inputs
- Automatic calculation of contrast features
- Calculation of most soil indicators and common indicator combinations


Soil Layer Thickness Data Requires Proper Entry (0-2, 2-8, 8-20, etc.)

SOIL Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
2								

Incorrect Depth

 Please enter the [Starting Depth] - [Ending Depth] downward from the surface. Spaces are allowed, but please do not enter any additional characters besides the single dash. Please verify that the starting depth from this layer matches the ending depth of the layer above. Document any leaf litter above the soil profile under Remarks.

¹Type: C=... ...ing, M=Matrix.

Hydric Soils **Schematic Hydric Soils³:**

- ▼ Histosol (A1)
- ▼ Histic Ep... (A2)
- ▼ Black Histic (A3)
- ▼ Hydrogen Sulfide (A4)
- ▼ Stratified Layers (A5)
- ▼ Organic Bodies (A6) (LRR, P, T, U)
- ▼ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ▼ Loamy Mucky Mineral (F1) (LRR O)
- ▼ Loamy Gleyed Matrix (F2)
- ▼ Depleted Matrix (F3)
- ▼ Redox Dark Surface (F6)
- ▼ ... (outside MLRA 150A)
- ▼ Reduced Vertic (F18)
- ▼ ... (outside MLRA 150A, 150B)
- ▼ Piedmont Floodplain Soils (F19) (LRR P, T)


Soil Color Requires Proper Entry (10YR 3/2, etc.)

SOIL Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR							

Incorrect Soil Color X

 Enter soil color as a hue[space]value/chroma, e.g. 10YR 3/2.
For neutral hue (N) on gley page enter hue[space]value/(blank), e.g. N 2.5/ .
Rounding intermediate colors should not be done to meet requirements of an indicator.

Retry
Cancel
Help

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <ul style="list-style-type: none"> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) 	<ul style="list-style-type: none"> <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) <input type="checkbox"/> (MLRA 153B, 153D) 	Indicators for Problematic Hydric Soils³: <ul style="list-style-type: none"> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Coast Prairie Redox (A16)
--	---	---

²Location: PL=Pore Lining, M=Matrix.

Sampling Point:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | ? <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR, P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input checked="" type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A, 150B) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | ³ Indicators of hydrophytic vegetation and |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | wetland hydrology must be present, |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | unless disturbed or problematic. |
| (LRR S, T, U) | | |

Restrictive Layer (if observed):

Type:

Depth (inches):

Remarks:

Hydric Soil Present? Yes ☒ No ☐

**Indicator
Automatically
Populated
And Presence
Of Hydric Soil
Checked
Based On
Data Entered**

Potential Indicators Met That May Require Additional Information Are Indicated By ?

Scrolling Over Red Triangle Will Display Indicator Requirements

SOIL Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	100					Muck	
2-6	10YR 3/1	100					Sandy	
6-18	10YR 5/2						Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR, P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☒ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150C)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ ? Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8)
- ☐ Thin Dark Surface
- ☐ Barrier Islands
- ☐ (MLRA 143B)
- ☐ Loamy Mucky Matrix
- ☐ Loamy Gleyed Matrix
- ☐ Depleted Matrix
- ☐ Redox Dark Surface
- ☐ Depleted Dark Surface
- ☐ Redox Depression
- ☐ Marl (F10) (LRR)
- ☐ Depleted Ochric
- ☐ Iron-Manganese
- ☐ Umbric Surface
- ☐ Delta Ochric (F)
- ☐ Reduced Vertic
- ☐ Piedmont Flood
- ☐ Anomalous Bright

(MLRA 149A, 153C, 153D)

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

A layer 4 inches (10 cm) thick, starting within the upper 6 inches (15 cm) of the soil surface, with a matrix value 3 of or less and chroma of 1 or less. At least 70 percent of the visible soil particles must be masked with organic material, viewed through a 10x or 15x hand lens. Observed without a hand lens, the particles appear to be close to 100 percent masked. The matrix color of the layer directly below the dark layer must have the same colors as those described above or any color that has chroma of 2 or less.

From Regional Supplement v2.0 User Notes: If the dark layer is greater than 4 inches (10 cm) thick, then the indicator is met, because any dark soil material in excess of 4 inches (10 cm) meets the requirement that "the layer immediately below the dark layer must have the same colors as those described above...". If the dark layer is exactly 4 inches (10 cm) thick, then the material immediately below must have a matrix chroma of 2 or less.

Drop Down Provides Choices For Redox Type

SOIL Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	100					Muck	
2-6	10YR 3/1	100					Sandy	
6-18	10YR 5/2	80	10YR 6/8	20	<div style="border: 1px solid green; padding: 2px;"> <div style="display: flex; align-items: center;"> <div style="border: 1px solid gray; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="font-size: 0.8em;">▼</div> </div> <div style="border: 1px solid gray; padding: 2px; margin-top: 2px;"> C D RM MS </div> </div>		Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

**Faint, Distinct, Or
Prominent Redox Color
Automatically Determined**

Prominent redox concentrations

Problematic Soil Indicators Potentially Met Are Marked By A ?

SOIL Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	100					Muck	
2-6	10YR 3/1	100					Sandy	
6-18	10YR 5/2	80	10YR 6/8	20	C		Loamy/Clayey	Prominent redox concentrations

A layer starting within 6 inches (15 cm) of the soil surface that is at least 4 inches (10 cm) thick and has a matrix chroma of 3 or less with 2 percent or more distinct or prominent redox concentrations occurring as soft masses and/or pore linings. These hydric soils occur mainly on depressional landforms and portions of the intermound landforms on the Lissie Formation.

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☒ Histosol (A1)

☒ Histic Epipedon (A2)

☒ Black Histic (A3)

☒ Hydrogen Sulfide (A4)

☒ Stratified Layers (A5)

☒ Organic Bodies (A6) (LRR, P, T, U)

☒ 5 cm Mucky Mineral (A7) (LRR P, T, U)

☒ Muck Presence (A8) (LRR U)

☒ 1 cm Muck (A9) (LRR P, T)

☒ Thin Dark Surface (S9) (LRR S, T, U)

☒ Barrier Islands 1 cm Muck (S12) (MLRA 153B, 153D)

☒ Loamy Mucky Mineral (F1) (LRR O)

☒ Loamy Gleyed Matrix (F2)

☒ Depleted Matrix (F3)

☒ Redox Dark Surface (F6)

☒ Depleted Dark Surface (F7)

☒ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☒ 1 cm Muck (A9) (LRR O)

☒ 2 cm Muck (A10) (LRR S)

☐ ? Coast Prairie Redox (A16) (outside MLRA 150A)

☐ ? Reduced Vertic (F18) (outside MLRA 150A, 150B)

☐ ? Piedmont Floodplain Soils (F19) (LRR P, T)

☒ Anomalous Bright Floodplain Soils (F20) (MLRA 153B)

☒ Red Parent Material (F21)

☒ Very Shallow Dark Surface (F22)

☒ P, T Barrier Islands Low Chroma Matrix (TS7) (MLRA 152B, 152D)

In Vertisols and Vertic intergrades, a positive reaction to alpha-alpha-dipyridyl that:

a. Is the dominant (60 percent or more) condition of a layer at least 4 inches thick within the upper 12 inches (or at least 2 inches thick within the upper 6 inches) of the mineral or muck soil surface,

b. Occurs for at least 7 continuous days and 28 cumulative days, and

c. Occurs during a normal or drier season and month (within 16 to 84 percent of probable precipitation).

On flood plains, a mineral layer at least 6 inches (15 cm) thick, starting within 10 inches (25 cm) of the soil surface, with a matrix (60 percent or more of the volume) chroma of less than 4 and 20 percent or more distinct or prominent redox concentrations occurring as soft masses or pore linings.

wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Scroll Over Red Triangle To View Indicator Requirements And Determine If Applicable

Hydric soils with limited automation

- Hydrogen Sulfide (A4)
- Organic Bodies (A6)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Reduced Vertic (F18)

When All Three Parameters Are Met Summary Of Findings Will Automatically Check That The Sampled Area Is Within A Wetland

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> X </u>	No <u> </u>
Hydric Soil Present?	Yes <u> X </u>	No <u> </u>
Wetland Hydrology Present?	Yes <u> X </u>	No <u> </u>

Is the Sampled Area within a Wetland?	Yes <u> X </u>	No <u> </u>
--	------------------	------------------

Remarks:

**Open a blank
Automated
Data
Form
for every new data
point.**

Testing

- Testing conducted using 270 delineations from 9 regions
- Testing demonstrated accuracy of automated data forms ensuring:
 - ▶ Correct spelling of plant names, correct application of 50/20 Rule, correct indicator status, and hydrophytic vegetation results
 - ▶ Application of FAC neutral test, secondary indicators, hydrogen sulfide odor, presence of reduced iron
 - ▶ Correct format of soil data entry, identification of omitted soil indicators, avoids erroneous soil indicators

Updating

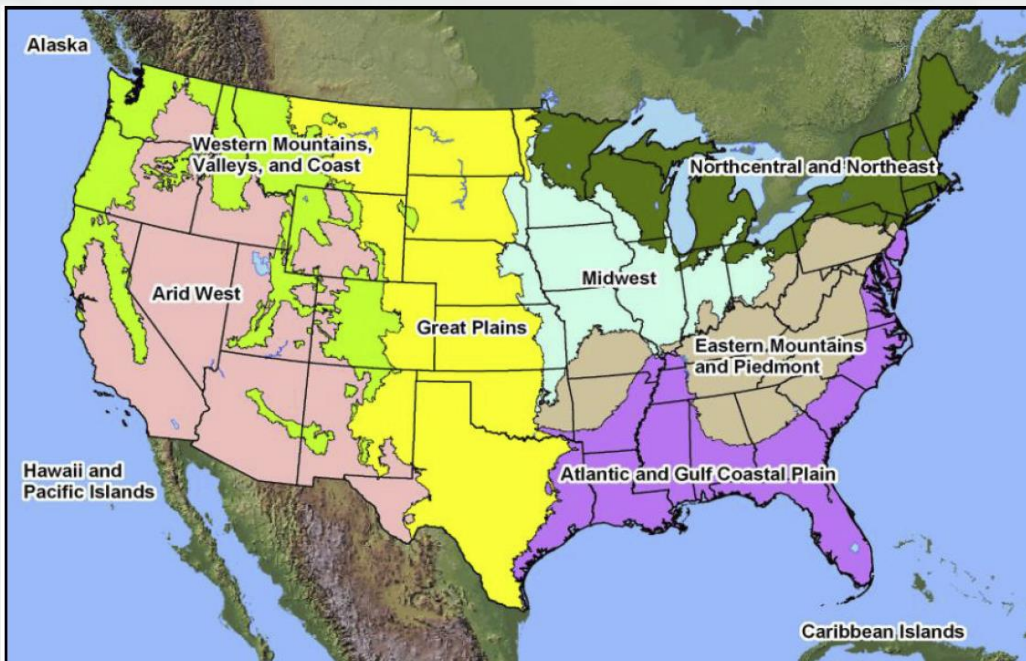
To date, automated data forms have been updated based upon changes to the National Wetland Plant list.

Over time, additional updates may be required with changes to plant indicator status, wetland hydrology indicators, or indicators of hydric soils occur.

The schedule for updates will be determined by Headquarters.

Products

- Automated data forms developed for each wetland delineation region
- Draft Technical Note (User guide) and Journal Article in management review
- Forms submitted for posting on USACE HQ website
- Email address for comments, questions, bug reports:
autodataform@usace.army.mil



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region			
Project/Site:	City/County:	State:	Sampling Date:
Applicant/Owner:	Section, Township, Range:	Local relief (concave, convex, none):	Sampling Point:
Investigator(s):	Subregion (LRR or MLRA):	Latitude:	Longitude:
Soil Map Unit Name:	Soil:	Long:	Lat:
Are climatic/hydrologic conditions on site typical for this area?	Yes	No	(If no, explain in Remarks)
Are vegetation, soil, or hydrology significantly disturbed?	Yes	No	(If needed, explain any sources in Remarks)
Are vegetation, soil, or hydrology naturally problematic?	Yes	No	(If needed, explain any sources in Remarks)
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important			
Hydrologic Vegetation Present?	Yes	No	X
Hydroic Soil Present?	Yes	No	X
Wetland Hydrology Present?	Yes	No	X
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B) <input type="checkbox"/> Subsoil Deposition (B2) <input type="checkbox"/> Dark Deposits (B3) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Iron Deposits Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Strained Leaves (B8) <input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> True Aquatic Plants (B6) <input type="checkbox"/> Hydrophytic Surface Colors (C) <input type="checkbox"/> Clusters of Rhizomes on Living Roots (C2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Filled Soils (C5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (E) (explain in Remarks)	
<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B9) <input type="checkbox"/> Mossy Tree Litter (B9) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Organic Burrows (C6) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shaded or Stressed Plants (D) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shadow Analysis (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC Neutral Test (D5)			
Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes	No	X
Water Table Present?	Yes	No	X
Saturation Present?	Yes	No	X
Includes copy of hydrology			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

**Open a blank
Automated
Data
Form
for every new data
point.**

Questions
wrtc@usace.army.mil

